

REMARKS

Claims 10, 12-16, and 19-22 are pending in the application. Claim 19 has been amended. Support is found in the Specification at page 5, line 15. No new matter has been added.

Rejection under 35 U.S.C. § 112, first paragraph

Claims 10, 12-16, and 19-22 stand rejected under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. The Examiner indicates that the portion of Claim 19 relating to the viscosity of the molding composition is not consistent with the specification. Claim 19 has been amended to include that the molding composition has a "viscosity at a shear velocity of 10 s^{-1} is greater than 1000 Pas, and at a shear velocity of 1000 s^{-1} , its viscosity is less than 300 Pas at a processing temperature that is 40 to 80°C above the melting point of the molding composition."

Claim 19 is supported in the Specification as file, and the rejected under 35 U.S.C. 112, first paragraph should be withdrawn.

Rejection under 35 U.S.C. § 102(a)

Claims 10, 12-16, and 19-22 stand rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent 5,605,945 to Sayed et al. (hereinafter "Sayed") in view of U.S. Patent 4,845,168 to Dykes et al. (hereinafter "Dykes"). The Examiner suggests that the polyamide disclosed by Sayed would inherently include the required viscosity parameter and that it would have been obvious to one of ordinary skill in the art to use the thermoforming process disclosed by Dykes with the Sayed polyamide to arrive at the claimed articles. Applicants respectfully disagree.

The present invention is directed to making articles by thermoforming. The method entails using a reinforced molding composition the resinous component of which includes one or both of (co)polyamide 6 and (co)polyamide 6,6. The composition is further characterized by a viscosity parameter.

Sayed discloses a polyamide compound having a high viscosity and high thermal stability. The polyamide is used in molding compounds that consist of (a) a thermoplastic, partly crystalline polyamide; (b) optional reinforcing materials; (c) an optional diepoxide; and (d) processing additives selected from lubricants, heat stabilizers, nucleating agents, and colorants.

Dykes discloses a process for fabricating a polyamide article, in which a composition of a linear aliphatic polyamide with a molecular weight of under 1,000, an epoxide and a catalyst is admixed in a manner that provides an effectively uniform admixture and extruded. The compositions may be used in a thermoforming processes.

In the present invention, the reinforced molding compositions have a pseudoplastic rheological behaviour defined by shear thinning viscosity parameters whereby the viscosity of the composition at a shear velocity of 10 s^{-1} is greater than 1000 Pas, and at a shear velocity of 1000 s^{-1} is less than 300 Pas at a processing temperature that is 40 to 80°C above the melting point of the molding composition. In other words, the present molding compositions have a significantly higher viscosity at low shear velocities compared to standard polyamides and comparably lower viscosities at high shear velocities. The viscosity profile is achieved via an increased degree of branching of the polyamides (see page 2, lines 11-16 of the specification).

Dykes requires linear aliphatic polyamides, which do not fit the pseudoplastic rheological profile required in the present invention. Nevertheless, the Examiner contends that it would have been obvious to take the polyamide polymer blends (col 2, lines 6-7) disclosed in Sayed (col. 1, line 58 to col. 2, line 7) and use them in the thermoforming process disclosed in Dykes.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the

reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142 quoting In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Examiner asserts that the polyamide molding compositions of Sayed could have been fabricated into a molded article by a thermoforming process as taught by Dykes. However, the Examiner offers no reason why a skilled artisan would take a branched polyamide and use it in a process designed for a linear polyamide. Branched polyamides are used in the present invention because they provide the claimed rheological profile. The Examiner has not provided any suggestion or motivation in either of Sayed or Dykes that would have led a skilled artisan to use branched polyamides in place of the linear polyamides in Dykes and then use them in Dykes' thermoforming process.

Because Dykes requires linear polyamides because of their physical properties, there would have been no reasonable expectation of success to use branched polyamides having the claimed rheological profile.

In the present invention, Applicants discovered that pseudoplastic reinforced polyamides with a rheological profile as described in the claims are extremely suitable for thermoforming (page 2, lines 6-8 of the specification).

The combination of Sayed and Dykes does not teach or suggest using pseudoplastic reinforced polyamides in a thermoforming process. Thus, preparing an article by thermoforming pseudoplastic reinforced polyamides as is presently claimed the claimed is not found in the prior art.

For all of the reasons outlined above, Claims 10, 12-16, and 19-22 are not obvious over the combination of Sayed and Dykes and the rejection under 35 U.S.C. 103(a) should be withdrawn.

Double Patenting Rejection

Claims 10, 12-16, and 19-22 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claims 1-10 of copending Application No. 10/349,360.

Applicants submit herewith an appropriate Terminal Disclaimer, which overcomes the rejection.

Conclusion

Applicants submit that the claims are now in form for allowance. Thus, reconsideration of the application and withdrawal of the rejections in view of the amendments and the remarks above are requested.

Believing the above represent a complete response to the Office Action and that the application is in condition for allowance, Applicants request the earliest issuance of an indication to this effect.

Respectfully submitted,

By



Jill Denesvich
Attorney For Applicants
Reg. No. 52,810

LANXESS Corporation
100 Bayer Road
Pittsburgh, Pennsylvania 15205-9741
(412) 777-2268
FACSIMILE PHONE NUMBER:
(412) 777-2612

/jme

S:\Chem Pittsburgh\Law Shared\SHARED\JD\7058 amend FAX.doc

Mo-7058

- 7 -